2004 PURDUE ROAD SCHOOL

HOT – MIX ASPHALT PAVEMENTS

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- DESIGN
  - Project Design
  - Contract Design
- DETAILS
  - Standard Drawings
- SPECIFICATIONS
  - Standard Specifications
  - Supplemental Specifications
  - Special Provisions

DESIGN

PROJECT	CONTRACT
Profile	Rideability
Underdrains	Stability
Thickness	Surface Friction
Fatigue Cracking	Durability
Cross Slope	Cracking
# of Lanes	Transverse
Width	Longitudinal
Pay Items	Moisture Resist.
	Joints

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STABILITY

DESIGN

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Underdrains	Stability
Thickness	Surface Friction
Fatigue Cracking	Durability
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	Joints

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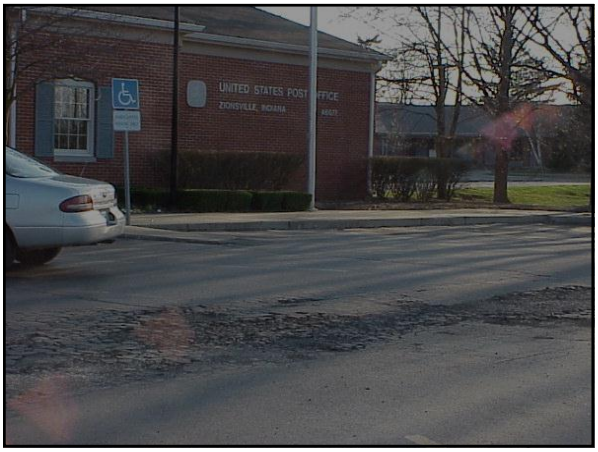
	Joints



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MOISTURE RESISTANCE

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DESIGN

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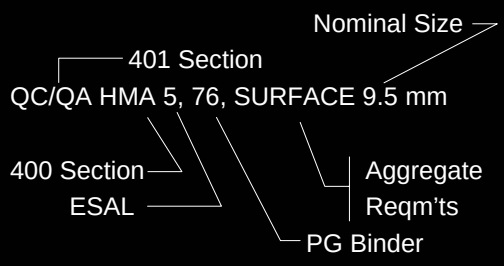
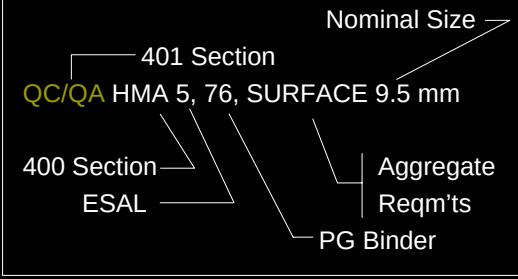
PAY ITEMS



PAY ITEMS
(Rideability, Stability, Durability)

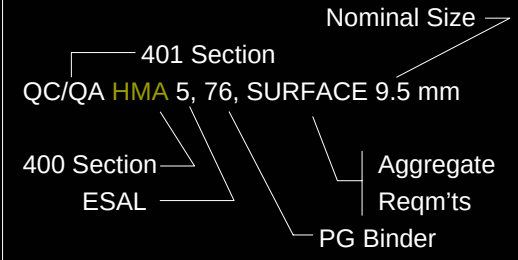


QC/QA

Greater than 600 tons of Surface, or

Greater than 1000 tons of Base or Intermediate

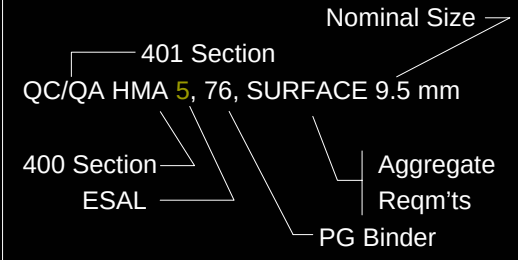
PAY ITEMS
(Stability, Durability, Moisture)



HMA

- 400 ITEM
  - SUPERPAVE MIX DESIGN

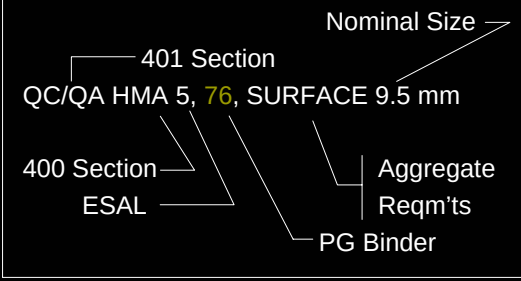
PAY ITEMS



5
(5: Stability, 1: Durability)

- ESAL RANGE calculated from traffic and percent trucks for each project
  - 1 Low Traffic
  - 5 High Traffic

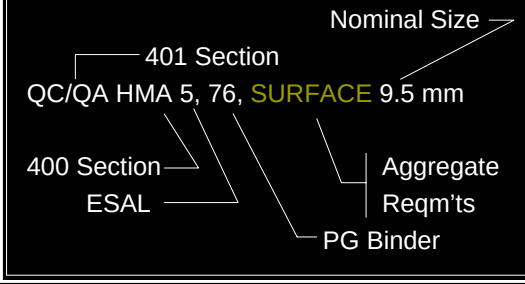
PAY ITEMS



76
(76: Stability, 22: Cracking)

PG Binder 76 – 22 all binders are designed for project based on LTPP's SHRP Bind Computer Program

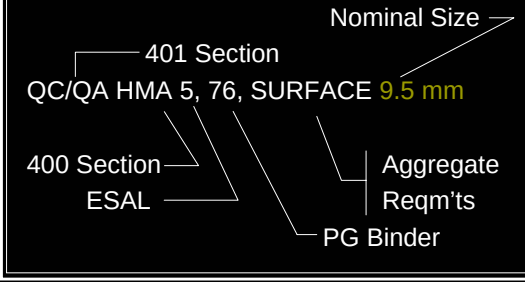
PAY ITEMS



SURFACE
(Surface Friction)

Mixture Designation controlling surface aggregate type and quality of aggregates

PAY ITEMS



9.5 mm
(Rideability)

Name of mixture

INDOT SPECIFICATIONS

- SPECIFICATION BOOK
- SUPPLEMENTAL SPECS
- SPECIAL PROVISIONS

CONTRACT DESIGN ISSUES

- Mix Design Method
  - SUPERPAVE (401)
- Binder Selection (Project)
  - PG Binder (902)
- Aggregate Selection
  - Fine Aggregate (904 / 904.02)
  - Coarse Aggregate (904 / 904.03)

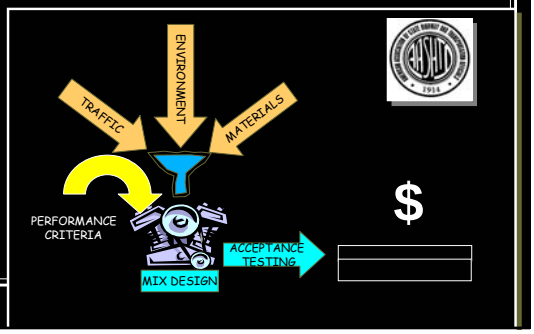
VOLUMETRIC PROPERTIES

- AIR VOIDS
- VMA
- BINDER CONTENT
- DENSITY

PLATE SAMPLE

Taking a Core Sample

VOLUMETRIC ACCEPTANCE



VOLUMETRIC ACCEPTANCE

- 10 % VMA
- 20 % Binder Content
- 35 % Air Voids Gyratory Compactor Samples
- 35 % Density

2003 QC/QA HMA

- Surface
  - 1,509,000 Tons/Mg
  - 2,514 Sublots
- Intermediate
  - 1,449,000 Tons/Mg
  - 1449 Sublots
- Base
  - 1,087,000 Tons/Mg
  - 1087 Sublots
- Total – 4,045,000 Tons/Mg

Referred to M & T

- VMA – 0
- Binder Content – 0
- Gyratory Low Voids – 34
- Gyratory High Voids – 31*
- Density – 16*
- Total – 80

  * 1 Sublot referred for Voids & Density

Referred to M & T 80 / 5040

- 45 Sublots in Lot 1 (19,16,5,5)
- 12 Sublots in Lot 2 (7,3,1,1)
- 13 Sublots in Lot 3 (2,4,5,2)
- 7 Sublots in Lot 4 (2,2,2,1)
- 0 Sublots in Lot 5 (0,0,0,0)
- 2 Sublots in Lot 6 (1,0,1,0)
- 2 Sublots in Lot 7 (0,0,1,1)